

## INFRARED SPECTROSCOPY OF PROTONATED ACETYLACETONE AND MIXED ACETYLACETONE/WATER CLUSTERS

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Acetylacetone (acac) is the simplest of the beta-diketones. which have both keto and enol tautomers with multiple protonation sites. We readily produce the protonated forms in the gas phase and the current investigation uses vibrational spectroscopy coupled with argon tagging to determine which protonated isomers are present in clusters of acac and the effects of solvation on the isomers observed.